

## **Attachment VII-4**

### **Detection/Compliance Monitoring Protocol**



EXPLANATION OF DECISION CRITERIA AND ACTIONS UNDER DETECTION / COMPLIANCE PROTOCOL	
ITEM	EXPLANATION
Semi-Annual Monitoring Sampling and Analysis or Annual for Post-closure years 9 – 30.	Routine schedule for detection monitoring to be followed, except under conditions noted below
Report All GC/MS C PQL Values for Each Well and Blanks	The Permittee shall follow the permit schedule for reporting of detection monitoring data, and shall report the data as defined in Attachment VII-3, Table 1 and Condition VII. E.1. of the permit. The Permittee shall also report results for field, trip and laboratory blanks run for the current sampling period
Report All Tentative J Values and Inorganic Data to Executive Secretary	The Permittee shall also report tentative values for all detection monitoring compounds (less than the Laboratory PQL/LOQ and identified with a J) and required inorganic and indicator monitoring parameters as defined in Condition VII. D. 5. a.iv. of this Permit.
Are any values reportable?	The Permittee shall report for each well all those reportable detection monitoring values defined in Condition VII. D. 5. b. iii. which are equal to or exceed the laboratory detection limit
Is there a pattern with other wells?	The Permittee after reviewing the data, may determine that a common source of sampling or analytical contamination resulted in unexpected occurrences. This may be demonstrated by showing comparable levels of concentration of contaminants in background wells with a waste management area monitoring system, or prevalence of the compound in other unrelated waste management area monitoring wells.
Can the source be identified?	The Permittee may establish via independent evidence that the source of common contamination was attributable to specific sampling or analytical sources.
Need to resample?	At the discretion of the Executive Secretary, the Permittee may be required to resample the GC/MS fraction showing detectable values for all positive wells. The Executive Secretary shall also consider whether resampling may be necessary at wells where reportable values are found in monitoring wells and blanks or contamination from sampling or laboratory sources.
Are values > the Critical Level?	All reportable Class I compound values in downgradient monitoring wells shall be compared against critical level values in Attachment VII-3, Table 1 of this permit. Concentrations equal to or in excess of these limits are considered significant at the critical level. For most compounds, this level is equal to the Appendix IX PQL, except where a specific value is given in the Attachment.

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Are compound and concentrations similar to blanks?	The Permittee may demonstrate that the compounds occurring at a significant level were also found at comparable concentrations in field, trip or laboratory blanks for the current round of sampling.
Source identified from sampling or lab?	The Permittee may also demonstrate that detected compounds were observed in historical blank data or that a specific new source was discovered during the current round of sampling
Retest for Compounds found, the critical level at those wells?	The Permittee shall resample within a month of notification by the laboratory for all compounds found, the critical level in those specific downgradient monitoring wells not excluded by the criteria above. Monitoring shall be only for those compounds and those wells showing values, the critical level.
False positive source identified identified ?	In the intervening period, the Permittee may present additional evidence of false positive contamination based on the criteria above. The Executive Secretary shall determine whether the Permittee has sufficiently demonstrated the presence of false positives.
Are values repeated at, the critical level?	Repeat values at concentrations in excess of the critical levels are considered highly significant and are presumptive evidence of ground water contamination.
Consider Data of Next Sampling as confirmatory	If the false positive source in the first round of sampling cannot be identified, or the repeat test does not confirm initial findings, the Permittee may resume the regular semi-annual or annual sampling schedule. However, further indications of significant compound concentrations by the criteria above in the same well in two consecutive subsequent sampling shall be considered confirmatory of ground water contamination.
Does Data from Previous Sampling Confirm contamination?	See comment above. Successive instances of contamination in a given well for the same compound(s) are considered highly likely indications of contamination. Three instances of consecutive contamination shall trigger automatic compliance monitoring.
Sampling of All Detection Parameters at Affected Wells	For purposes of determining contamination, three sampling periods within the normal monitoring schedule shall be followed (test (scheduled sampling event), retest ( one month from notification of facility) and third resample( 45 days from the second resampling event)). Only those wells showing contamination must be resampled.
Are these uncommon compounds?	Compounds not routinely showing above detection limit values, or occurring in sampling or laboratory data are further indications of the likelihood of contamination.

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Did more than one well in waste management area show contamination?	The presence of similar hazardous constituents in adjoining wells of a waste management area would be highly indicative of widespread contamination. Only one well need show contamination, however.
Other monitoring parameter evidence?	The GC/MS listed detection monitoring parameters are considered the best evidence of direct contamination. With suspected contamination, other required reporting data for inorganics or indicator may also provide further evidence. Evidence of oil and grease or elevated TOC levels may show obvious evidence of contamination, which can also mask GC/MS detection. Elevated phenols, unusual changes in metals, TDS, or inorganic parameters could be associated with introduction of leachate into ground water. The Executive Secretary may require analysis of leachate or other unit wastes at any point.
Waste Management Area in Compliance Monitoring	At this point, the waste management monitoring area is under compliance monitoring and must meet all of the terms of 8.6.10 and 11 UHWMR.
Full Appendix IX Scan for All Wells in WMA	The Permittee shall run a GC/MS analysis for all compounds listed in Attachment VII-3, Table 2, at all wells within the waste management area.
Detection monitoring at other wells and waste management areas (not on figure)	The Executive Secretary shall determine the extent of the waste management area under compliance monitoring. Although the permit initially has defined separable waste management areas, additional wells of other waste management areas may be included in the compliance monitoring system, depending on the pathways of contamination established. The remaining wells of the facility monitoring system may remain in detection monitoring.